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AUTHOR Scherer, Charlotte
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ABSTRACT

Eighty-eight sets of parents who enrolled their 4- and 5-year-old children in computer classes completed a questionnaire designed to gather demographic data and information about their reasons for enrolling the children and their attitudes about the importance of computer competence. Parents could check one of three reasons for enrolling their child: (1) It was a program for 4- and 5-year-olds; (2) It was important for their child to work with computers; or (3) Other. The first option was selected by 15 percent of parents, the second by 83 percent, and the third by 22 percent. In a follow-up telephone interview, 14 sets of parents were asked to choose among 10 reasons for enrolling their child in the computer class. The principal reasons chosen were: (1) computers are fun for children; (2) people need to know how computers work; (3) computers can help children learn math and reading skills; (4) people are using computers for more and more reasons; (5) computers can help a child be creative; and (6) I want to help my child learn to use computers. Two references are cited. (BC)

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Parent Perceptions of the Importance of Computer Knowledge for Young Children

Charlotte Scherer
Bowling Green State University

Parent Perceptions: Computers for Young Children

Dr. Charlotte Scherer
419/372-7392
215 Education
Bowling Green State University
Bowling Green, OH 43403-0243

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Abstract

Eighty-eight sets of parents who enrolled their four and five year old children in computer classes completed a questionnaire designed to gather demographic data and information about their reasons for enrolling their children. Attitudes about the importance of computer competence were also surveyed and 15 of the 88 families participated in a telephone followup interview. Did parents believe that an early start was necessary for later success in school? Did parents believe that young children could use computers to learn skills? Did parents think that computers were fun for young children? Results of the survey indicated that the prime reason parents enrolled their children was for them to have fun and enjoy an enrichment program with other children. However, it was also clear that parents felt their children should become comfortable as soon as possible with a tool perceived as being used more and more in our society.

Parent Perceptions of the Importance of Computer Knowledge for Young Children

Introduction

It has been well established in educational circles that early exposure to the computer can be beneficial to young children in a variety of ways. Hoot(1986) cites some of the earliest studies in discussing three issues revolving around young children's use of computers. He concludes that 1) "as an environmental influence, the microcomputer has the potential to change the way children think," 2) "as long as microcomputers [are] emotionally satisfying, [satisfy] the 'need to know' and provide self-constructive activity, then using microcomputers with young children [is] as appropriate as any other 'good' learning activity," and 3) "computers may provide concrete experiences and that children who select computer activities do so because the activity matches their cognitive ability" (Hoot, p. 20)

Other researchers corroborate the studies cited by Hoot. According to studies cited by Davidson (1989) in *Children and Computers Together in the Early Childhood Classroom*, computer use by young children can 1) increase thinking, reasoning and problem-solving skills, 2) help children construct and revise concepts, 3) stimulate children's play, 4) increase social interaction and cooperation, 5) bolster the child's self-concept, 6) teach computer skills and develop a positive attitude toward computers - both of which are needed for later computer use, and 7) inhibit sex-role stereotypes. Davidson also cites studies to refute many of the

common objections to using computers with young children and concludes that "computers can be useful additions to preschool classrooms if used wisely" (Davidson, pp.2-12).

Thus, as an educator, one might well conclude that young children should definitely be exposed to computers and that early childhood classrooms should include the computer as one of its many tools for early learning. However, some children do not yet get this exposure in their preschool settings or are not in a preschool setting at all. And parents are probably not generally aware yet of the benefits cited above for use of computers with young children. Therefore, suppose special classes are offered to introduce four and five year olds to the computer. Will children be enrolled in these classes? The answer is not only yes, but yes they will come in numbers sufficient to require extra classes, or waiting lists. Similar classes offered for older children have been less well attended. This situation leads this researcher to ask why the early childhood computer classes are more popular than computer classes for older children.

Since young children attend special computer classes only if their parents bring them, the question then arises about what motivates parents to enroll their young children in computer classes. Do they think that early exposure will give their child a head start on learning? Do they want their child to become comfortable with a tool that more and more people need to use in our society? Do they think that computers are a way for young children to have fun? Do they want to know how to help their young child use the computer more

at home? What other reasons do parents have for enrolling their child in a computer class? The results of a survey of the parents of 88 preschoolers who have been enrolled in a special computer class for four and five year olds offered five times over the past two and a half years will be presented and discussed in the remainder of this paper.

Method

A computer class designed to introduce young children to the computer has been offered for each of the past five semesters at Bowling Green State University through the Continuing Education Enrichment Program. The class was taught by the Director of the College of Education & Allied Professions Clinical and Computer Labs, assisted by volunteer university students in the computer education class for elementary education majors. Over that period of time 88 children have been enrolled (some children more than once) and parents have been surveyed with a questionnaire designed to collect demographic data and information regarding the parents' reasons for enrolling their children. A follow-up telephone interview was also completed with 14 parents of the children enrolled in the most recent class offered during the Spring, 1990 semester. Two of the sixteen children enrolled were sisters and one set of parents did not wish to be called for a telephone interview; hence, there were 14 interviews.

Results and Discussion

Demographic data on the 88 sets of parents indicated that they are highly educated, with 84% of the mothers having college or

advanced degrees and 78% of the fathers having college and advanced degrees. This was to be expected in a university community and perhaps is a contributing factor to the rest of the results. More than half (54%) of the mothers and slightly more of the fathers (59%) use computers at work and 55% of the children had used a computer in the library, in preschool or somewhere else before enrolling in this class, although in most cases it was very limited use. However, only 32% of these families own their own computer at home.

Although the class was billed as offered for four and five year olds, the actual age range was from 3 years to 6 years with 53% of the children being 4 years and 41% of the children being 5 years of age. Also, 88% were the firstborn or only child in the family. Thus it appears that many parents tend to put their children in the class as early as possible if they hear about it. The number of boys to girls enrolled has been consistently about 2 to 1 (66% boys and 34% girls). These demographics are summarized in Table 1.

Insert Table 1 about here

Originally, the questionnaire used the first four semesters asked parents to check one of three reasons they might have enrolled their child in the computer class: because it was a program for 4 and 5 year olds and there weren't many such classes, because they felt it was important for their young child to work with the

computer, or "other" where they filled in the blank. Of the 72 questionnaires completed, 83% checked that it was important for their child to work with the computer, 15% checked because it was a program for 4 and 5 year olds, and 22% checked other. The totals are more than 100% because some parents checked more than one response. Under "other," most parents wanted their child to have an enrichment experience or knew that their child already enjoyed the computer and would have fun in a computer class. In response to the question about what they hoped their child would accomplish, 75% hoped their child would learn, another 20% hoped their child would have fun and learn, 4% hoped their child would get some socialization and learn, and 1% hoped their child would have fun. From these results, it seems pretty clear that parents thought their children could learn about and from computers, and that they felt it was important to include computers in their young child's experiences.

Based upon these 72 questionnaire results, the questionnaire was refined for the fifth semester. A ten item list of possible reasons for enrolling their child was presented and parents were to rate each item as "very important", "important", "somewhat important", or "not important at all". This more specific list of reasons refined the parents' possible motivations for enrolling their child: getting an early start with computers, enjoying an enrichment program using computers, lack of availability of programs for 4 and 5 year olds, the ability of the computer to help young children learn skills needed for math and reading, the ability of computers to help children be

creative, the fact that computers are fun for young children, the need for a parent to learn how to help their child with the computer, deciding to purchase a computer for the family, the fact that computers are being used more and more by society, and the need for more and more people to know about how computers work.

The means for these ten items are shown in Table 2. A "not important at all" response was coded as a "1" and a "very important" response was coded as a "5". From these means, it remains clear that parents enrolled their children so they could have fun (put in mean) and because they would enjoy using computers. They also felt it was important for people to know how to use computers (mean), and by inference it was important for their child to know how to use one, and that the computer could help their child develop skills for reading and math. They also felt that more and more people are using computers (mean) and by inference, it was important for their child to use one. At the bottom of the rankings, results indicated it was not important to enroll their child to help them decide whether to purchase a computer for the family (mean), and it was not considered important to give their child an early start (mean). Nor was it very important to enroll their child in this class because there were not many enrichment classes for 4 and 5 year olds (mean). However, it was fairly important to enroll the child because the parents believed computers could help the child be creative (3.06), and because they wanted to learn how to help their child use the computer (3.06).

Insert Table 2 about here

The follow-up telephone interviews with this same group of parents would tend to reinforce the third ranked reason that it is important for their child's generation to know how to use a computer, and would indicate that they actually felt an early start was more important than the rankings would indicate. Parents also indicated that their child had already shown some interest in the computer and would enjoy a "hands on" class experience. Many of these parents plan to purchase a computer soon and expect that their child will use it for school work in the near future. Those who already own a computer expressed the idea that their child is beginning to use it now and would certainly be using it more as they get older and into elementary school.

Since the ratio of boys to girls has been consistently more boys than girls, parents interviewed by telephone who had boys in the program were asked if they would enroll a daughter. These parents assured the interviewer that they would. Upon exploring this question further, most parents felt that there might be two main reasons that there were always more boys than girls: first, there were other classes like gymnastics, and music lessons that might appeal more to girls and compete with their time to be in this class; second, several parents felt that in this community, there are presently more boys than girls of the appropriate age. They cited the proportions in preschool classes which were also male dominated,

and the number of friends they had who had only boys. Upon checking local school area kindergarten enrollment figures over the past three years, the average percent of boys was 55% and of girls 45%. Thus, the demographics of the community do reflect more boys than girls, but not quite as high a ration of boys to girls as were enrolled in the computer classes (66% boys vs. 34% girls). It is also clear from talking with the parents of the girls enrolled that they enjoyed the class and looked forward to coming each week as much as did the boys and that there were no distinctions between the two groups in terms of the class meeting the parents and the children's expectations, once they were in the class.

Conclusions

In summary, to answer the original questions about what motivates parents to enroll their young child in a special computer class, the following can be said: Do they want their child to become comfortable with a tool that more and more people need to use in our society? The answer is definitely yes. Both on the questionnaires and in telephone interviews, parents indicated how important they thought it was that their child's generation know how to use computers. Do they think that computers are a way for young children to have fun? Yes, definitely. The prime reason parents enrolled their child in the special computer classes was for them to have fun and enjoy an enrichment program with other children. Learning and fun were also the most frequently mentioned when parents were asked about hopes for accomplishment during the classes. Do they think that early exposure will give their child a

head start on learning? To some extent they do. While making it clear that they do not enroll their child solely to give them a head start, they do feel that computers can help them with skills needed for other learning, such as reading and math. Do they want to know how to help their young child use the computer more at home? Some certainly do want to learn how to help their children at home, but since many don't have computers at home, and because this would also be incidental to enrolling their child in a class where they were not present the entire time, this was not a major reason for the enrollment.

What other reasons do parents have for enrolling their child in a computer class? Other reasons for enrolling the child were to help with his/her socialization by providing learning in a group learning setting, to stimulate the child and help him/her be more creative. Also, because more and more people are using computers it is important for their child to use one as early as possible so that s/he will be comfortable with a computer by the time s/he will need to use one for school or work.

It appears, then, that these classes for introducing young children to the computer are important to the parents in this university community and that they will continue to be enrolled to capacity for the next several semesters. While it is true that this is a university and thus a non-representative community of the society at large, it does seem clear from this sample that well educated parents do feel that it is important to provide their children with enrichment experiences where the children will have fun, and with

computers which they find are increasingly used by both students and adults in our society. The implications from this study for other communities might be that more classes should be offered for young children to introduce them to the computer. There are known benefits to the child and the parents in many cases will be supportive of such classes and will enroll their children in them.

References

Davidson, J. I. (1989). *Children & computers together in the early childhood classroom* . Albany: Delmar Publishers, Inc.

Hoot, J. L. (1986). *Computers in early childhood education* . Englewood Cliffs: Prentice-Hall.

Table 1

Family Demographic Information

	Family	Mother	Father	Child
Number of Responses	88			
Education				
HS		16%	22%	
Coll		61%	37%	
Adv		23%	41%	
Computer Use				
Yes		54%	59%	45.5%
No		46%	41%	54.5%
Own a Computer				
Yes	32%			
No	68%			
Age				
3 yrs				01%
4 yrs				53%
5 yrs				41%
6 yrs				05%

Mean Age = 4.6 yrs

Table 1 (con't)

Sex	
Male	66%
Female	34%
Place in Family	
Firstborn/only	88%
Later born	12%

Mean number of children = 1.84

Table 2

Reasons Ranked from Highest to Lowest Mean

Reason	N	$\bar{X}$	s.d.
Computers are fun for young children	15	3.47	0.64
My child will really enjoy an enrichment program using computers	16	3.25	0.58
More and more people need to know about how computers work	16	3.19	0.91
Computers can help my child learn skills for math and reading	16	3.19	0.83
People are using computers for more and more reasons	16	3.13	0.72
Computers can help my child be creative	16	3.06	0.77
I want to learn how to help my child use the computer	16	3.06	0.77
There are not many enrichment programs available for four and five year olds	15	2.87	0.83
My child needs to get started using computer basics early	16	2.56	1.15
I want to see if my child enjoys the computer enough to consider purchasing one for the family	14	2.14	1.10